

CLAIMS

What is claimed is:

- 1 1. A radio access system high comprising:
2 an access point controller having a master connection handler and a sector quality of
3 service handler;
4 one or more multi-link controllers communicably coupled to the access point;
5 one or more transceivers communicably coupled to each multi-link controller;
6 a combiner communicably coupled to the one or more transceivers for each multi-link
7 controller; and
8 an omni directional antenna communicably coupled to the combiner.
- 1 2. The system as recited in claim 1, wherein each multi-link controller comprises:
2 a first interface communicably coupled to the access point controller;
3 a baseband controller communicably coupled to the first interface; and
4 a multi-transceiver ASIC communicably coupled to the baseband controller, the
5 multi-transceiver ASIC having a radio communicably coupled to each transceiver.
- 1 3. The system as recited in claim 2, wherein the baseband controller manages two or
2 more piconets on a clock-phase basis.
- 1 4. The system as recited in claim 1, further comprising a memory communicably
2 coupled to each multi-link controller.

1 5. The system as recited in claim 1, wherein the access point controller further
2 comprises:

3 a transceiver connection manager; and

4 a transceiver database communicably coupled to the transceiver connection manager
5 and the master connection handler.

1 6. The system as recited in claim 1, wherein the master connection handler and the
2 sector quality of service handler perform load-balancing functions.

1 7. The system as recited in claim 1, wherein the system is installed in a sporting venue.

1 8. The system as recited in claim 1, wherein the system is installed in an entertainment
2 venue.

1 9. The system as recited in claim 1, wherein the access point controller further
2 comprises a user database communicably coupled to the master connection handler.

1 10. The system as recited in claim 1, wherein the one or more multi-link controllers are
2 communicably coupled to the access point controller via a PCI bus.

1 11. The system as recited in claim 1, wherein the one or more transceivers are
2 communicably coupled to each multi-link controller via a USB bus.

- 1 12. The system as recited in claim 1, wherein the access point controller comprises:
2 a bus controller;
3 a central processing unit communicably coupled to the bus controller; and
4 a memory communicably coupled to the bus controller.

- 1 13. The system as recited in claim 1, further comprising an Ethernet interface
2 communicably coupled to the access point.

- 1 14. The system as recited in claim 1, wherein the system uses a Bluetooth
2 communications protocol.